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ABSTRACT

This study compared high and low performing schools in a state secondary physical education high stakes assessment and accountability program. The South Carolina Physical Education Assessment Program (SCPEAP) required teachers to assess samples of students on competency across four state mandated performance indicators. This study examined the performance of 62 schools quantitatively and 10 high, medium, and low performing, high compliant schools qualitatively. Quantitative data were submitted by teachers and analyzed to identify the performance levels of schools, teachers, and students. Qualitative data sources included teacher surveys, teacher interviews, and documents. The SCPEAP was able to distinguish between high and low performing schools, teachers, and students. Student performance was best on the cognitive test of health-related fitness knowledge and lowest on meeting the age and gender requirements of the Fitnessgram. Dance activities produced the most competent students, while the activities of bowling, softball, and racket sports had the lowest level of competency. High and low performing schools differed primarily by teacher characteristics, department cohesion, and school climate. There were also notable differences in curriculum, instruction, assessment strategies, and teacher perceptions, roles, and relationships. All participating schools made changes to their programs, though the amount and timing of that change differed across performance levels. (Contains 34 references.) (SM)

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ABSTRACT

A Comparison of High and Low Performing Secondary Physical Education Programs in South Carolina

Darla M. Castelli

Despite calls for reform in physical education (Rink, 1993) few large scale attempts to make comprehensive and systemic change have included physical education and even fewer attempts have documented that change. The purpose of this study was to compare high and low performing schools in a state secondary physical education, high stakes assessment and accountability program.

The South Carolina Physical Education Assessment Program (SCPEAP) required teachers to assess samples of students to evidence competency across four state mandated performance indicators. The state mandated criteria required students to be competent in two movement forms, take a written test on health-related fitness, participate in physical activity outside of physical education and meet the age and gender requirements on a fitness test. This study examined the performance of all 62 schools quantitatively and four high, two medium, and four low performing, high compliant schools qualitatively.

Quantitative data were submitted by teachers and analyzed using descriptive statistics to identify the performance levels of schools, teachers, and students. Qualitative data sources included teacher surveys, teacher interviews, and documents. These data were analyzed using descriptive statistics and a constant comparative analysis. A matrix was used to synthesize all data sources.

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The findings of this study revealed that the SCPEAP was able to discriminate between high and low performing schools, teachers, and students. Student performance was best on the cognitive test of health-related fitness knowledge and lowest on meeting the age and gender requirements of the Fitnessgram. Dance activities produced the most competent students, while the activities of bowling, softball, and racket sports had the lowest level of competency.

High and low performing schools differed primarily by the characteristics of teachers, department cohesion, and school climate. There were also notable differences in curriculum, instruction, strategies related to assessment, teacher perceptions, roles and relationships. All schools participating in this study made change to their programs; the amount and timing of that change was different across performance levels. Despite some data collection issues this physical education reform in South Carolina produced some substantial positive change.

A COMPARISON OF HIGH AND LOW PERFORMING SECONDARY PHYSICAL EDUCATION PROGRAMS IN SOUTH CAROLINA

The development of national academic standards and the emphasis on assessment of and accountability for achieving those standards is currently the focus of educational reform. Forty-nine states have created and published standards for K-12 content areas and most are adoptions or modifications of the national standards.

The establishment of standards at the national level and their adaptation or adoption at the state level has aided in the clarification of what basic competencies should be expected of students. A benefit of establishing a common set of standards for all students is the idea of establishing a shared meaning among schools, teachers, students, and parents regarding expectations for learning (Fullan, 1991). The notion of shared meaning is a change in thinking from the needs of the individual student to the alignment of the entire system.

Standards-based reform emphasizes attainment of a minimum standard of learning for everyone however the standards-based accountability movement is not without its critics. Those opposed to the standards-based accountability movement believe the notion of standards is contrary to the belief that the greatest importance in education is creating flexible, lifelong learners, who can adjust to a changing world (Sheldon & Biddle, 1998). "The more that accountability systems become focused only on cognitive achievement, the greater the gap will become between those students who

are doing well and those who are not" (Fullan, 2001, p. 152). These gaps result from a narrowing of the curriculum, or "teaching to the test." Opponents fear that there will be a lack of meaningful connections between content and application for the student when curricula are narrowed.

The presence of accountability in the academic areas has placed the emphasis on student learning, moving away from highlighting course work credits and attendance. High stakes accountability is a concept defined as an assessment, which results in a consequence, reward, or sanction (Smith & Fey, 2000). Haertel (1999) went one step further, describing high stakes accountability as tests or measurement that have the potential to alter instruction and change the curriculum. The underlying assumption of accountability according to Haertel is that teacher and school effectiveness would result from schools and teachers being held accountable for student performance.

High stakes accountability is a form of external pressure. Fullan (1991; 2001) suggested that the presence of external pressure is necessary for reform to be initiated. External pressure, from policy makers, legislators, and parents, has been identified as a key factor associated with the initiation phase of reform. Fullan (2001) also suggested that a balance between internal pressures (e.g., high administration and teacher expectations of student performance) and external pressures are more likely to result in second order change in schools (alterations in the fundamental structure).

A position paper by the American Educational Research Association (AERA) (2000) reiterated the potential value of high stakes assessment. "It is hoped that setting high standards of achievement will inspire greater effort on the part of students, teacher, and educational administrators. Reporting results may also be beneficial in directing

public attention to gross achievement disparities" (AERA, 2000, p. 1-2). The position paper also issues cautions, such as, (a) protection against high-stakes decisions based on a single test, (b) having adequate opportunities to learn, (c) validation for each separate intended use, and (d) guidelines for special education students, and to policy makers regarding the use of high-stakes assessment.

In physical education, despite small steps of progress, issues of legitimacy and worth are still barriers inhibiting systemic change of physical education. In spite of the call for reform in physical education (Rink, 1993), few comprehensive school reform efforts have included physical education, for at least two reasons, (a) physical education is not considered a core subject area, and (b) physical education, as a profession, has not made a case to be part of these reform efforts (Ward & Doutis, 1999).

The purpose of this study was twofold: First to identify the extent to which schools met the performance criteria and second to compare high and low performing schools in a state secondary physical education high stakes assessment and accountability program. Professionals in the state of South Carolina made a case to be part of the current standards, assessment and accountability movement. The South Carolina Physical Education Assessment Program (SCPEAP) is one of the first efforts by a state to hold schools and teachers accountable for meeting state standards in physical education. It is a unique approach to program assessment in that classes are sampled across four student performance indicators. Teachers assess student performance using state assessment materials and protocols, and a state monitoring committee determines the compliance and accuracy of the data submitted by the teacher.

An overall score for a school represents the weighted sum for all teachers and all performance indicators and is reported on a state school report card.

The high stakes assessment program in South Carolina has created the opportunity to study the viability of high stakes assessment as an instrument for change in physical education. It has also created the opportunity to study the differences between schools that perform well and those that do not. Knowing the characteristics of high and low performing schools can help us understand how to best facilitate change in physical education.

The efforts of the reform movement in South Carolina and the present study have been informed by a growing body of literature on how to produce change in schools. The relationship between reform, accountability and change is ambiguous; for change is not dependent upon accountability or reform alone. Change can happen with or without the presence of reform or accountability.

There are many factors identified in the literature related to school change. Bernauer & Cress (1997) talk about the role of accountability, time, and resources, as well as, a people-centered process approach to aid in the facilitation of change. Fullan, (2001) stresses the role of collaboration. Collaboration, though time and labor intensive, does facilitate dialogue and thus reform. Schools that get past the hierarchical leveling and form collaborative teams have the longest lasting innovations. Additionally, schools that create a climate of change within the entire school also demonstrate higher levels of implementation and longer lasting change (Foster, 1991). When people are embracing change together and change is supported by the school climate then perhaps teachers

have a better chance of getting to the point where there is actually impact on their students.

Reform efficacy, the effective implementation of a reform initiative, can be an influential part of change. Reform efficacy is influenced by teacher values and perceptions, an awareness of "best practice," and leadership. These factors involve various levels of the educational organization ranging from the policy makers to the teachers.

One of the strongest lines of research on change is related to teacher perceptions of the reform effort. Research suggests that teacher values and perceptions will influence how a reform is interpreted and implemented (Hall & Hord, 2001; Jewett, Bain, & Ennis, 1995). Odden & Anderson (1986) identified four key factors related to the initial stages of how teachers perceive school reform: (a) the amount of external pressure for accountability, (b) availability of effective awareness training, (c) school and teacher perceptions of fit, and d) the presence of a district advocate. A balance between external pressure for accountability and internal support is suggested to be the ideal scenario for successful school reform (Odden & Anderson, 1986; Fullan, 2001).

Reform necessitates an awareness of "best practice" by both teachers and administrators. When best practice was linked to district goals, teachers believed the reform to be a good match. State initiated programs are often unsuccessful because of local resistance, an unwillingness to change, and a lack of comprehension of the intention of a reform (Odden, 1991).

Leadership is also important for reform success. Odden & Anderson (1986) suggested that a single advocate within the district could act as a liaison to the state

department for interpretation and implementation. This person could help minimize uncertainties or mismatched intentions. Having a single person, as an advocate is valuable and arguably essential, however it requires specialized skills.

Determining the efficacy of a reform is dependent on being able to identify the characteristics of effective schools. Edmonds (1981) listed five characteristics evident in effective schools: (a) strong leadership, (b) a clear emphasis on learning, (c) a positive school climate, (d) regular and appropriate monitoring of student progress, and (e) high expectations of staff and students. MacKenzie (1983) identified additional common characteristics of successful schools as a high emphasis on academic standards, an acknowledgement of their own problems, multiple strategies to address problems, and strong communication among the staff members.

Levine and Lezotte (1990) and Sammons, Hillman, and Mortimore, (1995) examined slightly different factors influencing school effectiveness. Among these factors were (a) leadership, (b) effective instruction, (c) teaching and learning, (d) school climate, (e) learning environment, (f) shared vision, (g) positive reinforcement, (h) expectations, (i) monitoring of student progress, (j) staff development, (k) parent involvement, and (l) others. Each was considered to have contributed to effective schools and programs. It was unclear whether these factors would be predictive of school achievement in physical education or whether the factors identified as facilitating reform efficacy would predict change in physical education programs.

In 1995 the performance indicators were legislated for the high school program in South Carolina. Following a year of teacher development work to help teachers align their programs with the standards and the performance indicators, two studies were

done. Fleming (1998) investigated change efforts to implement mandated criteria after a year-long teacher development in physical education. He found that most of the teachers were most supportive of the new criteria and saw the effort to change physical education as advocacy. Teachers identified collaboration, student choice, and longer units of instruction as facilitators of reform. They also identified the diversity of student abilities, a variety of student levels of fitness, and low stakes accountability as inhibiting change in physical education.

In a second study, Wirzyla (1998) investigated three schools that had made the most progress in implementing the new reform after a year of teacher development work. Using a case study approach, he found that female, lead teachers , served as the driving force for change in the school. Willingness of teachers to create student accountability, the degree of implementation, curriculum change, and facilitators and inhibitors common in the literature were influential on change in physical education. In the model schools selected for study, Wirzyla (1998) found the teacher-coach role conflict was a strong inhibitor for change, particularly for the male teachers. The SCPEAP design was an attempt to address some of the inhibitors, such as, low stakes accountability and lack of male participation in change efforts in physical education, found in these studies (Fleming, 1998; Wirzyla, 1998).

Methology

Participants

Several levels of participation were identified for this study. Data from all schools (n=62) and all teachers (n=160) were used to analyze school performance. High, medium, and low performing schools were selected from the final scores given to each

school. All teachers at the high medium and low performing schools who participated in the assessment were surveyed. From the survey, teachers were selected from each of the high, medium and low performing schools for interview.

Selection of Schools

High, medium, and low performing schools were determined using two criteria. First the overall school score and second the level of compliance of the school. The level of compliance reflected the amount of data that was accepted as reliable and accurate by the monitoring committee. The researcher elected not to select non-compliant schools for qualitative study. Numerous testing protocol violations, missing data, or substantial errors in data submission made it impossible to determine the extent to which students met the performance indicators. This decision resulted in exclusion of 20 of the 62 schools from the qualitative data.

Overall school scores were used to select 10 out of the 62 schools. The four high performing schools originally ranked among the top seven schools in overall physical education score and represented four of the top five schools in level of compliance (88%). Two medium performing schools participated in this study. These two schools scored at the mean (M = 42%, SD = 23.01) or within plus five points of the mean (47). The level of compliance among the medium category schools ranged from 67% to 75%. Three low performing schools scored between 7% and 38% and had at least 50% compliance for all of the data submitted to SCPEAP.

All of the schools in this study had compliance scores of 50-100%, except for one low performing school. At the fourth, low performing school, one teacher had a compliance level of 67%, while the second teacher at that school elected not to submit

data to the SCPEAP. The input from the 67% compliant teacher was felt to be important because these data represented the only classes in which the data were accepted, but no students attained competence. The researcher attempted to balance region, school size, and SES in the selection of schools.

Selection of Teachers

All teachers in the selected high (n = 4), medium (n =2), and low (n = 4) performing schools were recruited for participation. A teacher survey was administered to teachers at the 10 selected schools. Twenty-eight teachers in the ten schools remained from the 2000-2001 school year that had participated in the data collection and taught state mandate physical education classes. Twenty-five of the 28 teachers returned the survey for a response rate of 89%. The survey was used to identify teacher perceptions at the high, medium and low performing schools and also to identify teachers to be interviewed.

Two representative teachers from high, medium, and low performing schools were identified for more extensive interviews, based upon the survey data. Teachers were selected for interview based upon their level of support of the assessment program (determined by the survey), an analysis of student competency in their class, participation in data collection training and Physical Education Institute teacher development, and gender. One teacher selected for interview was considered supportive, while the second teacher was less supportive of the SCPEAP. Sixteen teachers were selected for teacher interviews; a balance between gender and ethnicity was achieved. There were only sixteen teachers selected for interview because two

schools had a single physical education teacher on the staff and two schools had only one teacher remaining from the data collection school year.

Procedures

Qualitative and quantitative methods were used in this study. Quantitative data sources included school, teacher and student scores from the SCPEAP. Qualitative data sources included teacher surveys, teacher interviews, and an analysis of both SCPEAP and school documents.

School, Teacher and Student Scores

School performance data, available as a result of the mandatory data collection, were organized by the categories of school, teacher and performance indicator. Data for performance indicator number one was also organized by activity. A competency score was determined for each class based on the percent of students competent in that class. A monitoring committee confirmed teachers' scoring accuracy of student competency. Class scores for all teachers and all classes were averaged for each of the four performance indicators resulting in a school score for each indicator. The overall physical education score for a school was determined by weighting the school scores for each of the performance indicators: Performance indicator one (50%), two (20%), three (10%), and four (20%). Included in these data were scores of zero for data not accepted from SCPEAP because of protocol and for accuracy compliance issues.

Descriptive statistics were calculated for school, teacher, performance indicator and activity. Descriptive analyses were conducted using the school ($n = 62$) and the teacher ($n = 160$) as units of analysis. The first analysis included all non-compliant data (49% or less of the data were accepted by the monitoring committee) and the second

analysis excluded non-compliant data. Twenty schools and 50 teachers were excluded from, the second analyses because of non-compliance.

Teacher Survey

A survey was designed to collect data regarding the level of support for the reform initiative, performance indicators, assessment program effects, curriculum and instruction and facilitators and inhibitors to program effectiveness. The survey was based on the work of (Carter & Stanhope, 2001; Castelli et al., 2001) and was piloted with teachers from six high schools. Each teacher at the selected school, who had participated in the data collection, was mailed a survey. In many schools, staff turnover had occurred since the data collection process, therefore only teachers still at the school, with the same teaching responsibilities were mailed surveys.

Teacher surveys were completed prior to schools receiving information on their physical education scores. First, teacher surveys were analyzed to determine overall support for the SCPEAP program for the purpose of selecting teachers for interview. Second, high, medium and low performing schools were separated for analysis. Survey responses were examined to obtain descriptive data concerning demographics, reform efficacy, school and department characteristics, program characteristics, and facilitators and inhibitors of reform efforts. Both open and closed responses were entered into database using Excel 2000 v10.1 software and analyzed using the SPSS v10 software. Frequency counts were used to identify commonalities among high, medium, and low performing schools within a matrix.

Teacher Interviews

Formal interviews with two teachers from each high, medium, and low performing school were used to identify reform efficacy, school and department characteristics, program characteristics, and facilitators and inhibitors. Information obtained from the analysis of the school assessment plan, an initial technical report project (Castelli, et al., 2001), and the survey results were used to create the interview questions. A protocol created by Fleming (1998) and Wirszyla (1998), for conducting teacher interviews served as a guide for the development of an interview protocol in this study. A panel of experts reviewed the interview questions and protocol. Each teacher was asked a group of specific, common open-ended questions with follow up questioning and clarification as part of the interview.

Teacher interviews were conducted prior to schools receiving information on their physical education performance. Interviews with each of the selected teachers from the high, medium, and low performing schools were conducted during the school day, in a private, quiet space. The interviews were between forty-five and seventy-five minutes in length. The interviews were audio taped and the interviewer took written notes. Materials evidencing their responses to questions were requested and collected at this time.

Teacher interview data were analyzed using a constant comparative (Glesne, 1999) method. Spradley (1980) uses cultural domains, (patterns of behavior, artifacts or knowledge), to create categories giving meaning to the coded data. Spradley's (1980) analysis by cultural domains was employed in this study. First all discrete ideas were assigned a code, defined by rules of inclusion. Second, codes were assigned to domains

using terms as a representation of the semantic relationship, describing how these codes related to one another. Thirdly, the patterns and semantic relationships were reduced to themes.

Documents

A document analysis of current materials for the recruited schools was conducted in order to identify reform efficacy, school and department characteristics, program characteristics and facilitators and inhibitors. There were two different sources for documents in this study, those supplied to the SCPEAP by a school and those made available during school visitation. Documents reviewed for this study included school assessment plans, monitoring committee decision logs, teacher score sheets, correspondence between the SCPEAP and the school, and any other additional documents in their SCPEAP school profile. Additional documents were obtained during the school visitation. The teachers supplied items such as, department policies, worksheets, or homework assignments, during the visitation.

Synthesis of Qualitative Data Sources

All qualitative data sources, (teacher surveys, teacher interviews, and documents) were analyzed individually and collectively. Matrices were used to combine the data sources. Using performance level (high, medium, or low) similarities and differences were identified by frequency counts of each code. To identify facilitators and inhibitors the teacher responses on the survey and interview data were recoded as facilitators or inhibitors. A summary list of facilitators and inhibitors were placed in a matrix, by frequency, to identify commonalities between high, medium, and low performing schools.

In summary, multiple data sources were used for triangulation and to ensure trustworthiness of the data. Data sources included school characteristics identified by the state, document analysis of materials submitted to SCPEAP by a school, a teacher survey, materials made available to the researcher by a school, and interview data. Confirmability, dependability, and transferability were addressed through an audit trail of coded data. For example, teacher responses on the survey were compared to teacher responses to similar interview questions to confirm the reliability of the data.

Results

The results of this study are organized by the research questions. Section one describes the extent to which schools, teachers and students performed on the state mandated assessment criteria. In section two, profiles of high and low performing physical education programs and identified similarities and differences and are described by the data sources. Both quantitative and qualitative data were described by the data source for each research question.

School, Teacher and Student Performance on State Mandated Criteria

Quantitative data submitted to the SCPEAP by schools (n=62), available as a result of the mandatory data collection and analyzed by the SCPEAP, was used as the primary data source to identify the performance of schools teachers and students. The analysis for school, teacher and student performance differed by the unit of analysis. The school performance data was representative of all, teachers, classes, and students who were part of the assessment sample at that school. Performance by teacher combined the scores of all classes for a single teacher, across the performance indicators that the teacher submitted or should have submitted. Student performance was analyzed

by class, for the purpose of identifying differences in student performance by performance indicator and activity.

School Performance

To determine a school score for each indicator, the class means for all teachers were averaged. To determine the overall physical education score for a school each school performance indicator score was weighted according to policy determined by the SCPEAP. Performance indicator one was weighted 50% of the overall score, performance indicator two 20%, performance indicator three 10%, and performance indicator four 20%. As shown in Table 1, a state average of overall physical education scores was calculated as M= 42% (SD=22.79), representing the percentage of students scoring competent. The school physical education program scores ranged from 0% to 84%, out of a possible 100 %. Two schools received zeros for the overall performance. Individual school reports, detailing teacher and student performance were created by the SCPEAP and forwarded to each school. State averages for each of the performance indicators were also calculated and reported in Table 1. The scores by performance indicator were performance indicator one (41%; SD = 25.26), performance indicator two (57%, SD = 30.95), performance indicator three (41%, SD = 36.29), and performance indicator four (28%, SD = 24.85).

The mean school score for all the schools for each indicator, by unit of analysis and level of compliance is described in Table 2. Overall physical education score, excluding non-compliance schools was 55%. Compliance issues, determined by the acceptance or non-acceptance of the data by the monitoring committee, were influential in the data set. Class data not accepted by the monitoring committee received a "0" for

the percentage of students competent. For the purpose of this study, a school was considered compliant if 50% or more of the data was accepted by the monitoring committee. Likewise, a school was considered non-compliant if 49% or less of the data was accepted by the monitoring committee. To determine a school's level of compliance, the number of classes containing data that was accepted by the monitoring committee was divided by the total number of classes of data that was supposed to be submitted to the SCPEAP as part of the school's approved assessment plan. Schools that had 49% or less of their data accepted were excluded from this analysis. Twenty schools were considered non-compliant. As shown in Table 2, when non-compliant schools (n = 20) were excluded from the database the mean of the overall physical education score went up from 42% to 55% (SD = 15.78). The mean on each performance indicator went from 41% to 52% (performance indicator one), 57% to 73% (performance indicator two), 41% to 62% (performance indicator three), and 28% to 40% (performance indicator four).

Teacher Performance

Most teachers submitted data on several classes for each performance indicator. To examine performance by teacher the class scores for each teacher were averaged for each performance indicator. Using the teacher as the unit of analysis provided details regarding student performance within a given teacher's classes. Issues of compliance were present and will be addressed within this analysis. When the teacher was used as the unit of analysis the number of data points increased from 62 (schools) to 160 (teachers), when including non-compliant teachers. The performance indicators were weighted the same as for the school scores. In Table 2 the mean overall physical

education score, using the teacher as the unit of analysis, was 42% (SD = 26.64), the same as using the school as the unit of analysis. The scores by performance indicators also remained consistent with those scores resulting from the use of the school as the unit of analysis, the highest performance indicator being two (M= 58%, SD = 35.11) and the lowest being performance indicator four (M = 31%, SD =30.13).

Score by teacher excluding non-compliance teachers. For this analysis, fifty of the 160 teachers were excluded from the database because they had a compliance rating below 50% (less than half of the data submitted to the SCPEAP was accepted). The scores for compliant teachers appear in Table 2. The overall physical education score, using the teacher as the unit of analysis, among compliant teachers was 55% (SD = 20.56). The compliant scores were 13-14% higher for each of the performance indicators, when compared to the data including non-compliant schools. The breakdown of scores by performance indicator was, performance indicator one (M = 55%, SD = 27.59), performance indicator two (M = 72%, SD 25.77), performance indicator three (M = 56%, SD = 38.03), and performance indicator four (M = 44%, SD = 27.30), among the compliant teachers.

Student Performance by Activity

Performance indicator one (motor skill performance scored by rubrics) was analyzed by class, to provide additional descriptive information by activity. Performance indicator one, the average class score (M = 41%, SD= 25.26) represented the number of the students that were considered competent among all of the data submitted. As shown in Table 3, several activities with few classes had high competency scores including aquatics (100%) and the dance activities (86%). However,

not all activities with only a few classes scored well. For example, only eight classes reported data on soccer resulting in a low competence (35%) and only five classes did ultimate frisbee (41%). The activities of aquatics (a life saving class taught by the Red Cross) (100%, n = 1), square dance (100%, n = 3), ballroom dance (92%, n = 1), folk dance (91%, n = 1), line dance (89%, n = 3), and aerobic dance (76%, n = 7) had the high competence (Table 3). Among the lowest competency activities were bowling (24%, n = 10), softball (29%, n = 13), tennis (32%, n = 30), soccer (35%, n = 8), badminton, (35%, n = 32), golf (37%, n = 9), and frisbee (41%, n = 5). The most compliant activities were dance (86 - 100%) and table tennis (86%).

Profiles of High and Low Performing Physical Education Programs

In an attempt to understand high and low performing schools the data sources were analyzed separately and then synthesized into a profile. The results are organized by data source (teacher surveys, teacher interviews, and documents) then data sources are combined to create a profile of high and low performing schools. Within the description of each data source, the results will be ordered by the categories of reform efficacy, school and department characteristics, programs characteristics, and facilitators and inhibitors. Teacher demographics will only be described in the teacher survey section.

Summary of Results from the Teacher Survey

The results in this section represent responses to both open and closed questions and are reported in this order, (a) teacher demographics, (b) reform efficacy and teacher support of the SCPEAP, (c) school and department characteristics, (d) program characteristics, (e) facilitators and inhibitors.

Teacher demographics. More teachers from high performing schools completed the survey because many of the teachers, from low performing schools, who had participated in the data collection, had left that school. The staff turnover was greatest among the low performing schools. At the high performing schools 11 out of 12 teachers remained in the same positions, whereas, only 10 out of 18 remained in low performing schools. The 25 teachers who completed the survey had been teaching for an average of 20 years and all the participants were either coaches or athletic administrators.

Reform efficacy and teacher support of the SCPEAP. Teacher responses to closed questions are listed in Table 4, open-ended responses are described in this section. As seen in Table 4, 80% of the physical education teachers were supportive of the SCPEAP. Differences in level of support between members of the physical education staff were often between "very supportive" and "supportive." Ninety-seven percent of the teachers agreed that teachers and students should be held accountable in physical education.

School and department characteristics. Ninety percent of all teachers surveyed thought there had been an increased collaboration between the members of the physical education department. Both high and low performing schools reported that collaboration even extended beyond the physical education staff as teachers collaborated with parents to motivate students and track their progress with fitness and physical activity (83%). Teachers reported discussing performance indicators in staff meetings.

When asked if the administration was supportive, teachers across all performance levels, overwhelming (95 %) said yes. Yet, when asked what evidence they had

regarding administrative support, the only response consistent among the teachers was financial support (95%). Only 14% of all teachers remember an administrator observing a class, while only 17% had discussed the assessment program or the performance indicators with an administrator. Evidence of administrative observations and discussions were only found in high performing schools.

Program characteristics. Teachers believed that performance indicators enhanced student learning. Little difference was found regarding strategies to address performance indicator one, as most teachers agreed that basic skill instruction, longer units of instruction, and student compliance were important. Differences were found with regard to amount of test practice, teacher expectations, student choice, and number of years teaching and coaching the activity. High performing schools reported practicing the assessment fewer times and have higher expectations of students than lower performing schools. Teachers in high performing schools had selected activities that they had coached and taught for a long time to be assessed.

As shown in Table 4, low and medium performers reported an increased focus on health-related fitness. These results do not suggest that teachers in high performing schools did not do less fitness, it is more a result of high performing schools increasing the emphasis on health-related fitness prior to the SCPEAP. The teachers identified 18 different instructional practices as ways in which they attempted to help the students attain competence in performance indicator two. The writing of individual goals, monitoring progress, personalized instruction, class discussions, and the use of fitness labs and lectures were also commonly identified by the teachers as strategies for helping students with performance indicator two. There were no differences in the instructional

practices selected but there were differences in the frequency of use of these strategies. A substantial difference was observed between the high and low performing schools in the use of homework (Table 4). Teachers at low performing schools used homework more than teachers at high performing schools, whereas high performers more often use seatwork. Among the types of homework assignments identified by the teachers were having students design fitness programs, bookwork, worksheets, journals, Internet projects, and case studies.

Teachers perceived performance indicator three as being the least important. Teachers brainstormed physical activity opportunities available in the community, used daily physical activity logs, had high expectations for participation, graded participation and used parents to help get students to participate in outside of physical education physical activity. Teachers contacted parents and coaches recruiting their help with performance indicator three. A few teachers, from low performing schools, provided additional activities themselves, such as, intramural activities, lunch hour open gyms or a walking program. Unlike performance indicator one and performance indicator two there were reported issues of cheating by the students. For example, there was little evidence that a student had participated in physical activity outside of physical education, but via phone conversation, the parent verified participation by their son/daughter.

Performance indicator four required students to meet their age and gender requirements for the Fitnessgram© fitness tests. Students were the least competent in performance indicator four, yet 89% of the teachers believed that performance indicator four was attainable for their students. Teachers at the low performing schools were the

most pleased with the student's performance and suggested that they had exceeded their expectations.

High performers were more likely to address fitness every day. Additional teaching strategies across high and low performing schools included, increased distance work, did more component specific activities, practiced testing techniques more often, increased the amount of time spent on fitness, set higher standards, offered more choice in fitness activities, provided fitness challenges, increased testing frequency, increased parent involvement, and closely monitored student progress. High performing schools used fitness testing for more than just an assessment, such as, creating personal goals to be completed as part of performance indicator three.

Some differences were found between high and low performing schools for the frequency of use of textbooks, classrooms, and the curriculum guide. High performing schools teachers reported using textbooks (67%) far more regularly than teachers at low performing schools (38%). Yet, teachers at low performing schools reported using a classroom as a teaching space (63%) and consulting the curriculum guide (63%) more frequently than the teachers at high performing schools (33%) and (42%), respectively.

Facilitators and inhibitors. Table 5 lists the facilitators identified by teachers on teacher survey and confirmed within the interview data. The top six facilitators identified by the teachers were strong communication (100%), administrative support (84%), other physical education staff (84%), physical education institutes (PEIs) (84%), performance indicators (80%), and student accountability (80%).

As shown in Table 6, there was not as strong of consensus among the teachers as with the facilitators. Changing SCPEAP materials (60%), interruptions (60%), and

assessment protocols (52%) were the top three inhibitors identified by all teachers on the survey and confirmed by the interview data. The remainder of the inhibitors were experienced by less than half of the teachers surveyed.

When comparing Table 5 and 6 it would appear that there was an equal number of facilitators (25) and inhibitors (25) identified by the teachers, however this is not the case. A frequency of all incidences of facilitators and inhibitors revealed a much larger number of facilitators (259) than inhibitors (149). Difference between high and low performing physical education programs will be described in the profile section.

Summary of Results from the Teacher Interviews

The results in this section represent responses to both open and closed questions and are reported in this order, (a) reform efficacy, (b) school and department characteristics, (c) program characteristics, (d) facilitators and inhibitors.

Reform efficacy. Reform efficacy can be described as teacher "buy in," support of, or implementation of the performance indicators into the curriculum. Many teachers, across performance levels, stated that they we initially nervous or anxious about the SCPEAP. Teachers recalled how the SCPEAP forced them to communicate with each other and plan together. In many cases, teachers took on different or additional teaching responsibilities to meet the requirements of teaching two different movement forms. During the data collection process teachers helped each other with filming, took responsibility for each other's students, or moved to a new space to accommodate the situation.

When a teacher at a low performing school was asked how students perceived participating in the SCPEAP, they replied,

You know the students. It depends on who is teaching the class. My students are very fine with it...because I think I teach close to what the protocols do...But I think some of, you know, it was not exactly the teaching method that the [other] teachers had started using.

- School #34 (low performing), Teacher #1

Teacher #1 suggested that, not only are student characteristics unique but also that teacher behavior had an impact on the student's attitude or performance. Teacher expectations and instructional goals are part of placing an emphasis on student learning.

Overall, teachers did welcome the presence of the performance indicators and spoke positively about how it guided their own decision making in regard to physical education curriculum. It also helped teachers to hold students accountable.

It think it [the SCPEAP] has brought order to it [my teaching] and has allowed me to follow a progression...and not to try to teach too much. And I think it has made fitness a priority in teaching.

-Teacher #1, School #60 (low performing)

The SCPEAP helped to guide teacher decision making, selection of content, order priorities, and hold teachers and students accountable for content. Teacher support for the SCPEAP ranged from weak to very strong. Despite this range of support the SCPEAP was overall positively received. Ninety-seven percent, of the teachers in this study stated that students and teachers should be held accountable, however, at times teachers were so focused on the assessment that they lost sight of their students.

I think the assessment is a wonderful idea. It really brought out the finer points with the teachers. But as far as the assessment part, at the

beginning of the program I was a little leery about what was going on, what children were doing, whether this was going to help the kids. As I was going through the assessment, I sort of lost track of the kids. My concern was definitely making sure that I was doing the right thing to make sure that my grade, as far as the assessment goes, how it was going to end up. So my focus was not really on the kids. I don't think I concentrated on putting myself into the kids like I usually, normally do.

-School #7 (low performing), Teacher #1

School and department characteristics. The teaching environment included facilities, demographics and student characteristics, but more specifically represented the atmosphere. These intangible characteristics are often difficult to describe and to quantify. When asked to describe how physical education was perceived by the students and other teachers in the building one teacher replied,

> The discipline is treated like any other discipline. I mean, the professional respect that you see and the climate...I'm talking across the board. I'm talking in between departments and there is a lot of respect that comes and goes [mutual respect]. It [physical education] is not like a step child. We are not here because they have to have us. At least I have never felt that.
>
> -School #61 (high performing), Teacher #2

This teacher was from a high performing school and was the only teacher who clearly defined the physical education departments place within the school. Within research we typically rely on demographics to characterize a school; high performing, excellent, low poverty index. In the high performing schools there was an expectation,

beyond those of the physical education teachers that students were going to work hard in physical education.

Approaches to physical education, across school performance levels have some commonalities and some differences. Leadership, policies and teacher experience helped to shape what the physical education programs looked like. A single spokesperson represented departments. The leadership within the department was the heartbeat, modeling the pace and tone for others (teachers or students) to follow. Leaders were often the initiators of policies. Documents, such as, a "dress out" policy were generated to help departments express their expectations, to hold students accountable and to have the teacher focus be more student learning and not on whether they changed their clothes. High performing schools had several, administrative supported policies in place prior to the SCPEAP.

Teacher enthusiasm, (an expression of enjoyment, pride, excitement or passion about teaching, coaching or being part of the school community), was more evident among the teachers at high performing schools. Every teacher interviewed from a high performing school and one teacher from a low performing school, when asked, "what is it like to teach here?," offered statements, such as,

> I think we take pride in all aspects of physical education. I know some schools, maybe just the weight room. Maybe some schools, it is basketball. But I think we take pride in our weight room, our cardio room, and everything we do in the gym.
>
> -School #61 (high performing), Teacher #2

The relationships between teachers, teachers and administrators, teachers and students, and teachers and parents were identified as important factors in school performance in physical education. Long-standing physical education staffs, which communicated with each other and the administration, were more likely to have higher overall physical education scores. At a high performing school one teacher stated,

> Well there is one thing as a department here, we always want to be the best and not just...you know. Everyone felt it [the SCPEAP] was such a shared thing.
>
> -School #6 (high performing), Teacher #1

Relationships, in particular those between teachers and administration, were perceived by teachers as both a facilitator and inhibitor. Overwhelmingly teacher's thought that administrative support played an important role in their physical education department performance. When asked about administrative support, one teacher at a high performing school stated,

> It's excellent. It's excellent. It keeps me working here. We have excellent administrative principal support. It is very strict with high expectations. There's an in-school suspension in place and a demerit system and there's lots of expectations for good behavior. A lot of pressure is put on the students in that respect.
>
> -School 60 (high performing), Teacher #2

Low performing schools could not provide similar evidence of administrative support.

Communication between physical education staff members was often informal and impromptu. High performing schools had established a daily routine of "checking-in" with each other, in the office before school, in the gymnasium, or as the students were in the locker rooms in order to have time to communicate. Often these staffs had a single leader, usually the department chairperson, who served as liaison to the administration and directed programming. Most teacher-teacher relationships were positive but sometimes tension existed between teachers, particularly during the data collection process. When asked about the relationships between staff members at one low performing school, the teacher quickly responded with what bothered him the most, "...unmotivated teachers or teachers that is just not going to do anything."

-School #22 (low performing), Teacher #2

Departments, in which everyone was moving toward a common goal, were able to relieve tensions, such as the one described. Relationships extended beyond the school. Teachers, across all performance levels contacted parents to make them aware of the assessment program and particularly the requirement of outside of physical education activity for performance indicator three. Some teachers mentioned that they recruited parents' help to increase participation levels. The relationships between teachers and parents were sometimes strained because the teachers believed that the parents were actually lying for the student, particularly during the data confirmation for performance indicator three.

High performing schools had an awareness of factors that could be inhibitors to student performance. They were not always able to act on the inhibitors that arose, but they had an awareness of potential inhibitors. Low performing schools did not exhibit as

strong an awareness of potential inhibitors. One teacher in a high performing school suggested that department success was linked to addressing potential inhibitors.

> Part of having a successful program is doing all of the little things. You have got to work out all of the little things so they do not crop up and become big things.
>
> -School #24 (high performing), Teacher #2

This teacher was referring to things in his instruction that might help students be successful. For example, needed a lighter barbell for his female students. So he requested that equipment through his department head.

Program characteristics. High performing teachers in this study placed a different emphasis on student learning, based upon their instructional goals, teacher expectations, teacher enthusiasm, instructional methods, grading, monitoring progress, student choice, and teaching roles. Teachers, at high performing schools did not have to offer extra credit or threaten a failing grade to get students to participate in the assessment. One teacher at a high performing school, when asked if assessment had changed his teaching, said,

> ...It changed my expectations of them [his students]. With the Fitnessgram©, we gave them a challenge...We sat down, we wrote down goals. This is your goal. If you can do two push ups today that is two more than you did yesterday.
>
> -School #40 (high performing), Teacher #2

Teaching methods were influential with regard to student and school performance. High performing teachers used a wider variety of teaching methods. The

extensive list of teaching methods was previously described in the survey data. The teacher interview data confirmed the survey data suggesting that teachers were willing to try new methods, or just about anything to get their students to perform well on the assessment. Those teachers who focused their instructional goals and expectations beyond performance on the assessment had more successful students.

Many teachers, at medium and low performing schools, (as well as one teacher from a high performing school), had to film the assessment up to as many as seven times to get the students to perform well. Yet, a high performing teacher was quoted as saying that she only filmed once for volleyball and twice (because of an absence) for badminton. She attained high competency in both volleyball (92%) and badminton (84%). A trend that arose among the teachers at high performing schools was the use of homework. Few teachers, at high performing schools used homework to teach health-related fitness concepts. Many teachers, from low performing schools, tried to use homework for the first time, as an attempt to help students understand health-related fitness concepts and the design of personal programs. In general, teachers at low performing schools talked about how it was difficult to get the homework back and how it created more paperwork for them.

Most schools, regardless of performance level linked the performance indicators to grading. Classes were organized into two different movement forms and the rubrics for each activity were used to grade students. What proportion the rubric counted toward a student grade, varied across all schools. Performance indicator two, the cognitive test, was most often used as a final exam.

When I was teaching an aggressive group two years ago, those kids loved it [being filmed and assessed using rubrics]. They wanted to see how they scored [on the rubrics]. Now we give them a grade for it.

-School #32, (high performing), Teacher #2

For performance indicator three teachers used individual goal setting and monitoring progress toward that goal to facilitate competency. Teachers from high performing schools were more likely to incorporate the fitness (from performance indicator four) into the requirements for performance indicator three. The highest student competency was found among those teachers who addressed both performance indicator three and performance indicator four simultaneously. Among the low performing schools there was little evidence of cross over between the performance indicators. Monitoring student progress for performance indicator three and four and including performance indicator criterion as part of physical education grading was evident at all schools, to varying degrees.

We kept the logs for students to write in. But we did ask them to sign a contract giving 2 or 3 items that they participate in. With the first group we wrote the contract at the end. I gave them this and asked them to list their activities, times, intensity, and when it was done. Then in the end they pulled the stuff from the logs.

-School #32, (high performing),Teacher #1

The role of student choice and the activities in the curriculum had a different level of importance and action between high and low performing schools. All high performing schools organized physical education content by two different movement

forms, allowing students to sign up for the movement forms of their choice. All four low performing schools did not offer a student choice through official guidance scheduling. Two of the four low performing schools stated that they were working on it and hoped to add the scheduling part in the near future. A by-product of student choice was tracking. Students with similar characteristics enrolled in the same movement forms, creating more homogeneous groups. Classes that used student choice were likely to contain students of the same gender and/or ability.

> Now I have all of the girls, but Cameron got all of the aggressive kids because that is his track right now. It makes you teach differently. For me I focus more one skill, for Cameron it becomes a lot of management.
>
> -School, #24, (high performing),Teacher #2

Despite having completed the assessment themselves, the teachers were often not accurate in assessing how well their students performed. When asked to describe the physical education program at her school, a teacher from a low performing school, was quoted,

> You know what? It's really hard because they [the other teachers] do what they want to do...up to a point. You know? It's not that I rule with an iron fist. It's like this is what we are doing...but my students, I'm sure, did fine, because I teach like the protocols.
>
> -School #34 (low performing), Teacher #1

When this quote was compared to her quantitative scores, there was some disparity. In volleyball 95% of her students were competent but only 65% were competent in golf. For performance indicator two, 64% of her students had successfully

completed the health-related fitness test. The data for performance indicator number three was not accepted by the monitoring committee and data for performance indicator number four was accepted, but identified only 33% of her students as competent. The teacher thought her students had done well, but according to the SCPEAP her scores were below average.

Facilitators and inhibitors. Table 5 summarizes the facilitators identified in both the teacher survey and interview data by school performance level. The most prominent facilitators, or supports, identified by the teachers across schools were, strong communication, administrative support, other staff members, PEIs, performance indicators, and student accountability. There were difference in the facilitators of high and low performing schools, in student choice (92% high; 25% low), data collection training (15% high; 100% low), communication with the SCPEAP committee (15% high; 100% low), higher expectations of students because of the SCPEAP (23% high; 0% low), and student characteristics (0% high; 25% low). As shown in Table 6, the most common inhibitors across schools were changing SCPEAP materials, interruptions, assessment protocols, large class sizes, and time. Low performing schools identified class size as the most frequent barrier and high performers identified interruptions. Differences in inhibitors also existed between paperwork (15% high; 63% low), lack of textbooks (0% high; 50% low), facilities (0% high; 38% low), lack of resources (0% high; 50% low), other physical education staff (0% high; 25% low), lack of knowledge (0% high; 25% low), management during testing (0% high; 25% low), student characteristics (0% high; 25% low).

Documents

A folder of documents containing items, such as, the school assessment plan, revisions to the assessment plan, score sheets from the teachers that were submitted to the SCPEAP by a school, and decision logs from the monitoring committee was reviewed by the researcher. These materials were originally delivered as a box of materials (videotapes, score sheets, paper and pencil tests, physical activity contracts, and fitness test scores) to the SCPEAP office by a school. The monitoring committee reduced the materials to a folder upon reviewing the data for compliance.

Reform efficacy. An analysis of school assessment plans revealed that teachers in the high performing schools exclusively taught state mandated content addressing all performance indicators, in each of their classes. Medium and low performing schools tended not to address all of the state mandated content. Medium performing schools (n = 2) and low performing schools (n = 4) had more of a tendency to have split teaching responsibilities, often teaching additional subject matter (drivers' education, social studies) or taught two movement forms but no health-related fitness.

School and department characteristics. An analysis of teacher score sheets and decision logs submitted to the SCPEAP, identified only one notable difference between high and low performing schools. The difference was related to issues of compliance. Teachers at high performing schools were more compliant than those at low performing schools.

Program characteristics. Documents describing department policy, such as, "dressing out" or attendance, were considered to be facilitators. High performers had

policy in place prior to the accountability. Many low performers were still developing guidelines or expectations for student behavior.

Profile of High and Low Performing Schools

All data sources and results for the high (n =4), medium (n =2), and low (n =4) schools in this database were synthesized, using matrices to create profiles of high and low performing schools. The profiles of high and low performing schools are organized by the categories of reform efficacy, school and department characteristics, program characteristics, facilitators and inhibitors. Similarities and difference between high and low performing schools are described under each category.

Reform Efficacy

Similar reform efficacy characteristics. High and low performing schools employed similar strategies to implement the state mandated criteria and assessment program. These strategies related to correspondence with the SCPEAP, the use of SCPEAP reference materials and preparation for performance indicator three (outside activity). Both high and low performers corresponded with the SCPEAP and referenced SCPEAP materials (notebook and CD-ROM) throughout the year. High and low performers expressed a willingness to contact the SCPEAP with questions via phone, at data collection training sessions, during Physical Education Institutes (PEIs), or at policy board meetings. For performance indicator three, both high and low performers brainstormed community activities with the students in order to get them to participate in physical activity outside of the physical education class. The researcher was unable to determine if there were differences in this brainstorming.

Different reform efficacy characteristics. There were differences in the strategies high and low performing schools used to implement the state mandated criteria and assessment program. Differences were related to the degree of compliance with which the assessment data was submitted, strategies used for data collection, relationships both within the department and with others outside the department, department leadership, frequency of use of materials, how performance indicator three was met, and the number of times schools practiced the assessment. High performers submitted more compliant data. This was probably because the department collected data as a team, whereas, low performers were less compliant because the teachers collected data independently and acted as individuals.

Department functioning was also a key in the manner in which high performing schools communicated with each other and with the administration. High performers communicated effectively with each other and established more positive relationships with other teachers, students, parents and administration, than low performers. A department leader, at high performing schools facilitated frequent communication with the administration.

There were differences between high and low performing schools in the manner in which they used the provided assessment materials. Low performing schools referenced the SCPEAP materials (notebook and CD-ROM) more frequently than high performers. Low performers also accessed the state curriculum guide more frequently than high performers. The state curriculum guide gave teachers help in planning and teaching different content areas within the curriculum. No teacher at a high performing school listed the state curriculum guide as a reference.

To address performance indicator three low performers went beyond the criteria and offered walking programs for students, open gyms during lunch hour, and/or intramural activities. These opportunities were designed to encourage participation in physical activity outside of the physical education class. It would mean that students did not have to find a place to participate in the community. Low performing schools also reported practicing the performance indicator number one and two (movement forms and health-related fitness, respectively) assessments more often than the high performing schools. For some low performing teachers, they had practiced the test more than three times as much as their counterparts. Low performers believed this strategy would lead to student success.

School and Department Characteristics

Similarities and difference in school and department characteristics were found to revolve around relationships between teachers, teachers and students, teachers and parents and teachers and administrators, teacher perceptions of the criteria and assessment program, and the manner in which teachers balanced their roles and job responsibilities.

Similar school and department characteristics. Similarities were found in teachers' relationships with each other, students, parents and administration. Both high and low performers expressed increased collaboration between department members since the assessment program began. A similar method of collaboration increased dialogue among the physical education staffs. Across performance levels teachers were willing to contact parents and felt this contact was an important part of verifying performance indicator three and could be used for motivational purposes to help increase

student performance. Overall, the school administration was identified as supportive in both high and low performing schools.

Both high and low performers had overwhelming support for the SCPEAP (97%) and accountability (86%) for schools, teachers and students. Teachers also believed teaching basic skills were important for student success, particularly in performance indicator one. Despite thinking that SCPEAP had increased student understanding of physical activity, teachers were in agreement that students did not welcome the opportunity for physical activity. This may have been influenced by the fact that teachers believed performance indicator three was the least important.

The roles that teachers played within the school were similar between high and low performing schools. All teachers at high and low performing schools were full time physical education teachers and were also coaches or athletic administrators.

Different school and department characteristics. There were facets of teachers' relationships, perceptions, and roles that were different. Low performing department members reported increased collaboration but still acted as individuals. These actions affected data collection, curriculum, and instruction, as no "team approach" was evident among the low performers. Teachers' contact with parents was more frequent among high performers and completed in different ways. For instance, high performing schools were more apt to send letters home that would communicate teacher expectations, explanations of the SCPEAP, reminders of deadlines, and solicitation of parental support. Low performers mostly contacted parents by phone.

Though all teachers reported a supportive administration, the relationships with administration were different between high and low performers. In high performing

schools the administration demonstrated an active support. Teachers could provide examples of specific things that administrators did to demonstrate their support (e.g., release time for teacher development). The support in low performing schools was passive (e.g., teachers left on their own to solve problems). With regard to financial support, low performers reported increases in financial support during the year of data collection, in some cases, being able to access more resources than ever before. High performers felt they had adequate financial support before the accountability was in place.

Teachers had different levels of enthusiasm, expectations of student performance, expectations of student compliance, and perceptions of student performance. Teachers at high performing schools were more enthusiastic and had higher expectations of their students. Most believed that student compliance influenced performance scores, but low performers had more incidence of student compliance (e.g., attendance, participation).

Teachers at low performing schools thought their students had performed better than they actually did. These misperceptions could be attributed to two different causes. Teachers at low performing schools either had low expectations for students or they did not have as good of an understanding of the SCPEAP materials as the high performers. Teachers actually scored students using the assessment material so it is unclear why teachers in low performing schools did not have a more realistic perception of the performance of their students.

High performers adhered to recommendations made by the SCPEAP to teach two different movement forms, health-related fitness, address outside of physical education

physical activity, and fitness test. At high performing schools teachers were assigned to classes and given the responsibility to teach the recommended content. Low performers had a wide range of teaching responsibilities (e g , drivers education, social studies), creating competing demands between teaching different subjects and coaching. Teachers at low performing schools had difficulty balancing the demands between teaching and coaching and were in conflict with their roles. High performers balanced their responsibilities and used their coaching experiences to their advantage.

Program Characteristics

Similar program characteristics. A willingness to make change was observed for both high and low performers. All schools reported making change to their programs because of the SCPEAP. Both high performing and low performing schools had changed their programs to include longer units of instruction and block scheduling. Longer units of instruction and block scheduling were recommended changes made to schools at the teacher development PEIs. Schools limited the number of activities to provide longer units of instruction. One significant change was teacher discussions regarding performance indicators and the SCPEAP. A second valuable change was teacher consideration of the performance indicators and the SCPEAP materials before making decisions regarding curriculum and teaching, resulting in better alignment.

Both high and low performers used performance indicator one rubrics for assessment (beyond data collection), used performance indicators for grading, and used classrooms and textbooks for instruction. Teachers across performance levels were open to new and different teaching strategies and attempted to use a wide variety of strategies to help students attain competency. Strategies such as test/retest, sharing the results of

assessments with students, and linking physical activity to grading as a motivational tool were employed. Elimination of performance indicator one activities because they were too difficult for students, was not evident for either performance level.

Different program characteristics. Schools were different with regard to the timing of the changes they had made. High performing programs changed when the legislation mandated the four criteria (1995) and before they were held accountable with the assessment program. Change in high performing schools, placed a greater emphasis on student learning and resulted from teacher discussions of the performance indicators and the SCPEAP. These discussions lead to alignment and integration all performance indicators into the curriculum. Low performers had more discussion than before but it did not necessarily lead to the same depth of results. Added changes were the use of student choice, more specific instructional goals, and administrative supported policy, which were better established in high performing schools.

High performers began to address health-related fitness with the advent of the state criteria. This is possibly the reason why health-related fitness was addressed more frequently in high performers than low performers. Two high performing schools even created cardio fitness rooms to help meet performance indicator three and four.

Low performers initiated change concurrently with the accountability and data collection. Teachers at low performing schools had a tendency to focus on a single performance indicator and not all four, had unclear expectations of student performance, used homework more frequently than high performers, and consulted the state curriculum guide and the SCPEAP materials more often.

High performers used textbooks and classrooms more frequently than low performers and elected to use seatwork over homework. Low performers used homework more often than high performers with mixed results. High performers monitored student progress, linked student progress to personal goals, and recorded that progress more frequently than low performers. High performers utilized their coaching experience to teach and assess activities that they had coached for a long time. Low performers were less likely to utilize their coaching experience.

Facilitators and Inhibitors

Similar facilitators and inhibitors. The most common facilitators for both high and low performing schools were, (a) establishing strong lines of communication both within the department and between teachers, student, parents and administrators, (b) the strong active support of administrators, (c) the support of other physical education staff members, (d) PEIs, (e) clear performance indicators, and (f) having a mechanism for student accountability.

The most common inhibitors for both high and low performers were, SCPEAP materials that changed during the assessment year, interruptions in the school schedule, and unclear assessment protocols. Inhibitors were more context specific, than the global facilitators, therefore there was little agreement between schools.

Different facilitators and inhibitors. The following facilitators were considered to be of different importance between high and low performing schools: (a) student choice, (b) the importance of data collection training, (c) communication with the SCPEAP committee, (d) higher expectations of students because of the SCPEAP, and (e) student characteristics. All high performing schools had a student choice curriculum

and attributed student success to its presence. Low performers did not have choice curriculum and were either inhibited by guidance department scheduling (making either no attempt to change or were unsuccessful at change) or did not consider student choice an important factor. Low performers valued data collection training and correspondence with the SCPEAP more than high performers. High performers stated that the higher expectations of students were because of the SCPEAP and thus facilitated student performance. Low performers did not see the SCPEAP increasing student expectations. Both high and low performers believed that student characteristics (e.g., abilities, behaviors) were a facilitator but had different perspectives. For example, high performers were more likely to attribute student success to a student characteristic, such as, ability. A teacher from a low performing school might have the perspective, "if we get good students (athletes or students with good conduct) in our class, it helps."

The following inhibitors were considered to be of different importance between high and low performing schools: (a) too much paperwork, (b) lack of textbooks, (c) inadequate facilities, (d) lack of resources, (e) other physical education staff, (f) lack of knowledge, (g) management during testing, and (h) student characteristics. Sixty three percent of low performing teachers believed that paperwork required by the SCPEAP was an inhibitor while only 15% of high performers agreed. All of the other inhibitors listed were only issues for low performers. No high performing school stated the factors of resources, facilities, other staff members, knowledge, management or students as inhibitors. These inhibitors were specific to context. For example, some low performing schools had very poor facilities and lacked resources that other schools might have. Yet, other low performing schools may have adequate facilities but

struggled managing students during the data collection because the staff members did not work together.

High performers had a better awareness of potential inhibitors and attempted to take steps to remove or change the barriers. Low performers lacked an awareness of potential solutions to inhibitors or felt that nothing could be done to change the inhibitors.

Discussion

The purpose of this study was to identify and describe the characteristics of high and low performing, secondary physical education programs. It was also the purpose of this study to identify the impact of state level teacher development, program assessment and accountability on physical education programs part of the first state data collection. This section is organized by a discussion of the issues related to total performance of the schools, teacher compliance, characteristics of high and low performing physical education programs, physical education performance indicators, and the effectiveness of the SCPEAP reform.

Total Performance

A school overall performance represents the percentage of students at a school considered competent in the state standards. The average score for all the schools was 42%. At first glance the scores seem lower than might be reasonably expected for a criterion based assessment, in which every school had the potential of attaining 100%. Yet, it is the belief of the researcher that the score is representative of performance criteria that is attainable for secondary physical education students in South Carolina. The low state average for overall physical education performance can be explained by

several factors. (a) this is the first-ever attempt at high stakes assessment in physical education, (b) some teachers were asked to do things that they had been trained on, only recently, and (c) compliance issues related to data collection.

A First Attempt at High Stakes Assessment in Physical Education

This is the first time that schools and teachers have been held accountable, by an external force, for meeting the physical education performance indicators. Marginalization of physical education within most schools has allowed some teachers to experience complete autonomy for what they do and little expectation for student performance for an entire career. This was new territory for physical education teachers and they will need time to get accustomed to this level of accountability. Scores are likely to increase as teachers become aware of and implement effective strategies for attaining student competency. In this study teachers attempted a wide variety of teaching strategies, placing an emphasis on skill practice, progressions, and practice of the tests to help students attain competency. In many cases it took state level accountability for teachers to attempt these strategies. Annual or biannual teacher evaluations are often conducted by administrators who know little about what quality physical education looks like, therefore there was low accountability.. With feedback from the student scores collected by the teachers and feedback from the SCPEAP, teachers can begin to reflect on what practices produced the highest results in student performance, under the circumstance of accountability.

Like teachers, students also need time to adjust to increased teacher expectations. Initially students may resist or not adhere to new program requirements because they are not used to the content, expectations, or procedures. Lack of curricula alignment with

the performance indicators also contributed to low performance scores. Redesign of curricula does not happen over night. Change is a process, not an event, frequently taking years to complete (Hall & Hord, 1977). It took the presence of accountability for some teachers to begin to teach to the performance indicators and initiate change. Often change was concurrent with the actual assessment itself. If curricula alignment took place its effects may not have been part of these initial assessment results.

Physical Education Teachers Have Never Been Asked to...

Veteran physical education teachers were being asked to do many things that they had never done before, nor have been they trained to do. The dissemination of information and support for implementation are the two main challenges facing reform (Rink & Mitchell, 2002). District in-service is frequently unrelated to physical education, thus leaving teacher development up to professional organizations. Extensive teacher development opportunities provided by the SCPEAP attempted to introduce best practice and integrate performance indicators into curricula. This process of teacher development took place over a period of seven years. Using PEIs, data collection training, SCPEAP materials, a state curriculum guide, and CD-ROM multimedia, the dissemination of information extended well beyond traditional teacher development opportunities. Most teachers found the teacher development sessions to be critical to their teaching and data collection, however there were signs of resistance and disappointment from some teachers.

The concept of "essential friends" has been a term equated with support throughout the implementation process. The concept of the "essential friend" has been recognized by the SCPEAP committee as effective support but was discontinued after

one yea. because of a lack of resources. Its importance may still be relevant for medium and low performing, high compliant schools. Current reform efforts encourage a dialogue between This notion of teachers helping teachers took place at PEIs in this reform. More extensive, formal support, such as, the enactment of an essential friends program may be a necessary next step for programs to continue making change, particularly in the area of compliance.

Little is know about low performing, low compliant schools because of their exclusion from the qualitative data. Something does need to be done to help these schools. The "essential friends" may be a way to help low performing, low compliant schools. Further investigation is needed of this population.

Teacher Compliance Issues

Compliance is a relative term. Of the 65 schools originally selected for participation in the 2000-2001 data collection, 62 submitted data to the SCPEAP. The three not collecting data were granted permission to move to the next cycle because of local issues. Among the 160 teachers who were identified on the assessment plan to submit data, 151 submitted data. This means that when forced to by a state mandate, schools and teachers, whether high or low performing complied and submitted data.

Issues of compliance were not a result of resistance to submitting data, but caused by teacher errors in the data collection process. The most common issues of compliance were documentation, modification of the task, scoring of the assessments by the teacher, student identification and technical errors (Williams, 2002). With practice, feedback and teacher development these compliance issues related to documentation and student identification can be resolved.

Compliance issues related to modifications of the tasks and technical difficulties may have been a result of the structure of data collection training sessions. Participation in the data collection training, during the summer before the 2000-2001 school year, was limited to two participants per school. If schools had a large physical education staff it was up to those individuals who received training to disseminate the information to other physical education staff members. The results of this study highlighted that the relationships between staff members within the physical education department, the ability to get a long with one another, strong communication, and a single leader within the department were characteristics of high performing schools. The absence of some of these characteristics in medium and low performing department may have contributed to the non-compliance of other staff members or of the program as a whole.

Compliance issues related to the scoring of the assessment by the teachers may not be so easily solved. The literature suggests that few physical education teachers do formal assessment (Lund, 1993; Veal, 1993). If teachers are using videotape for assessment for the first time, it may be difficult for the teacher to identify critical elements of the movement form. The high school rubrics, used to assess performance indicator one, contain holistic criteria, encouraging a participation level of competency over mastery of skills. Competence in performance indicator one is defined as, the ability to independently and safely participate in an activity and maintain a level of continuity in that activity that would make participation enjoyable" (SCPEAP, 2000). Identifying proper technique, tracking consistency, and objectively determining if the student could participate in this movement form independently is complex. Most teachers used rubrics accurately to assess movement forms in physical education and the

level of accuracy was related to student competency (Williams, 2002). The majority of physical education teachers were positive and receptive toward teacher development, therefore, continued opportunities for teacher development and training should be offered.

Characteristics of High and Low Performing Physical Education Programs

The large spread of scores in the overall physical education performance (0-84) suggests there is discrimination among physical education programs. Some teachers and physical education departments were better able than others to help students meet the performance indicators. High performing physical education programs look different than low performing physical education programs. Much of the findings regarding characteristics of high and low performing physical education programs were supported in the literature. Teachers, departments and schools had different characteristics in high and low performing physical education programs.

Teachers Matter

The individual efforts of teachers matter in physical education performance. Teachers at high performing schools can express why students performed well on the performance indicators because their actions are purposeful attempts to attain student competence. Teachers at high performing schools were more reflective and had self-assessed their own teaching and programs before state level accountability. These teachers behaved differently than teachers at low performing schools.

The findings about high performing teachers seem to be common sense. These teachers emphasize student learning, have high expectations, balance teaching and coaching responsibilities, use a variety of strategies to meet the students' needs, assess and monitor student work. The multidimensionality of teaching makes these characteristics more complex.

Teacher expectations. The literature has identified high teacher expectations as a characteristic of both high (Levine & Lezotte, 1990) and low performing schools (Teddlie & Reynolds, 2000). Teachers at high performing schools in this study were more likely to have high expectations. Teacher expectations are a means to increase student accountability. The support for accountability may be a way for teachers to get help in raising expectations. Teachers may not have an understanding of appropriate expectations for secondary physical education students. Standards help teachers identify and, in many cases, raise expectations of students. The challenge will not be in raising the expectations but avoidance of narrowing of the curriculum.

Teacher gender and performance in physical education. Contrary to the literature there were no discernable differences in performance between male and female teachers. Previous literature identified females as teacher-leaders in physical education departments and more substantial contributors to change efforts (Wirszyla, 1998). Females did predominantly hold positions of leadership (physical education department head, athletic administrator, etc.) but they were not the only ones participating in this reform. Male teachers expressed taking pride in their teaching and not wanting to be the reason why the program did not perform well.

It took accountability to get males to adhere to the performance indicators.

Initially, when informed of the new state mandated performance indicators teachers, particularly males did adhere to teaching to those criteria. It took accountability to get the teachers to teach to the performance indicators. Male teachers did not want the responsibility of being the leader, but did take pride in how they and the department would be perceived. The potential of scores going public got the attention of many of male teachers.

Teaching and coaching responsibilities. Certainly the teaching-coaching role conflict is well documented (Fleming, 1998; Rink, 1992; Wirszyla, 1998) as some teacher-coaches overemphasize the importance of coaching. One of the most unexpected findings of this study was related to the performance of teacher-coaches. Teacher-coaches in this study assessed activities that they coached and used their coaching knowledge to their advantage. They balanced the responsibilities, by taking equal pride in both the physical education program and their coaching. These findings are likely to also be related to the presence of accountability. Perhaps high performing schools already believed that they had a good program and wanted to prove it to everyone else. These findings need further investigation to perhaps discover the reasons why these teacher-coaches at high performing schools are better able to balance their responsibilities to both teaching and coaching.

Department Cohesion

This research details what successful departments look like, the question is how do we create more physical education programs that look like the high performers in this study? Human relationships are part of workplace conditions. Some of us have worked enough already to know that no job, even ones that we love, is without some negative

interactions. Locke (1992) suggested that the removal of barriers were important to providing quality secondary physical education programs. Teachers at low performing schools in this study did not necessarily lack resources, planning time, or teacher development. The major barriers to low performing schools were other physical education staff members.

Long-standing, strong communicating departments that had a shared meaning (common understanding of vision) were most successful (Fullan, 1991). Development of a shared meaning (Fullan, 1991) of the intent of the change among department members has been considered a facilitator in the change process. Those departments that behave collaboratively create dialogue that often leads to higher levels of implementation and longer lasting change (Foster, 1991). When people work together, believe in change, and are supported by the school climate, change may evolve to impact the students.

Standards are a common set of expectations establishing a shared meaning for the departments (Fullan, 1991). Yet high performers in this study exhibited these characteristics. As a profession, physical education has never had a shared meaning. Performance indicators in South Carolina guided teacher and department decision-making. Teachers expressed having a better sense of what a student should be able to do when they exit physical education programs. Departments that identify and collaborate on a common vision have greater percentages of competent students.

Departments with this vision are able to align curriculum with the performance indicators and link the indicators together, resulting in meaningful activities for students. The communication between members of the department helped plan and collect data

together and also addressed all performance indicators equally. Teachers at medium and low performing schools were largely impacted by two things, other staff members who did not adhere to a shared meaning or a lack of attention to all performance indicators.

Low performing departments did not act as a unit but as individuals. Why do departments operate effectively or ineffectively? This research suggests that lack of expectation and accountability for teachers may be a significant factor related to the dysfunction of high school departments of physical education. Unlike low performing departments, high performing departments had someone, usually a department leader, who they held them accountable. In turn, an administrator held the department leader responsible for the performance of the department.

School Climate

The teaching environment and relationships are different in high performing schools. Two factors are important to consider when explaining these findings, school administration and the awareness of potential inhibitors. Administrative attitudes toward physical education are influential with regard to marginalization. Principals single handedly don't create school climate at a school. Teachers who suggest that principals are solely responsible would be short-sighted.

What principals expect of teachers and students, communication of and support of those expectations, are vital to school climate. All teachers believed that they had the support of administration, but was that really support? Did teachers at low performing schools just believe that they had the support of the principal because the principal left them alone, taking a "hands off" approach to management? At high performing schools teachers used words like "mutual respect," "equal with other subjects areas," or "an

importa.it part of the curriculum," to describe what physical education meant at their school. Administrative support was not merely supporting department policy, providing enough funds, planning time, and equipment. Administrative support at high performing schools was accompanied by expectation. These high performing teachers willingly accepted their responsibilities in exchange for dispelling marginalization issues. Teachers hinted that respect was earned through their program success, not simply available through unequivocal administrative support.

Teachers at high performing schools had a better awareness of potential issues, which could become inhibitors. This awareness went hand-in-hand with a positive relationship with administration, as some issues could be resolved through proactive planning. Unfortunately, for some low performing schools it is a harsh reality that many barriers exist for the schools, teachers, and students. In these cases sanctions levied for poor performance, are not the answer. Several schools of the sixty-two schools overcame poor school climates to succeed. Future research needs to look to them for answers.

Performance Indicators

There were not only differences between high and low performing schools, but also among the performance indicators. Regardless of the unit of analysis or level of compliance, performance indicator two (cognitive health-related fitness test) had the highest competence and performance indicator four (fitness test) had the lowest.

Performance Indicator One: Competence in Two Movement Forms

Secondary physical education classes have been saturated with team sports and game play, yet these results suggest that many students do not possess the ability to

participate in these activities successfully. Teacher directed activities such as aerobics, folk dance, line dance, and ballroom dance had the largest numbers of students attain competency. The traditionally popular activities of basketball and weight training had only about half of the students attain competence. Dance activities were most likely to result in student competence.

A limiting factor in performance could be related to the complexity or difficulty of tasks. To address issues of difficulty and complexity, the answer may be to introduce the activity sooner, not to eliminate the activity from the curriculum. The teachers in this study suggested the solution is holding middle school programs accountable. These variances in performance suggest that competency in two movement forms are attainable but that proficiency, as suggested by the national content standards in physical education, would be unreasonable for students in South Carolina at this time. The minimal state mandate of one credit of secondary physical education is not enough to attain proficiency in a few of these movement forms, even if student choice were employed consistently.

Participation versus mastery. The SCPEAP was built on several underlying assumptions, including the notion that; competent movers are more likely to participate in physical activity for a lifetime. Performance indicator one is assessed through criterion-based, holistic rubrics that promote a participation level of competency over mastery of technical aspects of performance. The student scores for performance indicator one identified many students who could not play a game of basketball, safely and independently, making the game enjoyable. If this current trend continues, it means that teachers will have to rethink how they teach activities. In this study teachers often

used test/retest strategies to help students attain competency. For basketball it would mean repeatedly playing three on three games. This strategy might encourage participation because of the enjoyment, but will it lead to competence? The profession needs to identify ways to best approach how to teach students to participate in basketball, safely and independently for a lifetime. Alternative curriculum models, such as, the sport education model may help to facilitate competency, through participation in varying roles.

An alternative argument may be teacher competence. Teachers may lack the skills to facilitate learning for a participation level of competence for students. Alternatively, they may possess the skills to do this but are not using what they know to aid students.

Curriculum implications. Too strong of adherence to standards may lead to teaching to the test and elimination of the activities that students find difficult. A continuous revisiting of standards, dissemination of changes in criteria, teacher development, and accountability will play a role in sustaining appropriate expectations of students. Physical education teachers presently support accountability in South Carolina. Assurances should be taken to ensure that this accountability would not result in regression of the profession, by eliminating difficult activities. Presently, the teachers did not eliminate activities because they were too difficult for the students.

Instead, activities such as dance should be more commonplace in physical education. Students need to understand that dance is a form a physical activity that lasts a lifetime. For most physical education programs the addition of dance would be an embellishment of the curriculum, not narrowing or teaching to the test. Additionally,

longer units of instruction should lead to the inclusion of skills, such as the spike or block in volleyball, and better understanding of tactics and rules. The inclusion of alternative models may aid in motivating students during longer units.

Student choice. High performing schools allowed students to select a package of activities representing two different movement forms. The use of student choice helped with motivation, student compliance, and accountability. The students had an interest in participating in the activities that they selected. Low performing schools are either inhibited by guidance departments with scheduling or have yet to realize the potential of student choice. The advantages to student choice were that it contributed to high student performance and minimized student compliance issues.

Student choice also led to ability and gender grouping. It has long been debated whether homogenous or heterogeneous groupings are better for learning. The present study does not address the question of tracking or like-groups, but does raise the question of how do students learn best? What was it about student choice that led to higher performance? With regard to gender, recent literature in math and science has suggested that females and males may learn better apart, as males command more attention in the classroom. Is there a similar effect in physical education and can student performance be enhanced be organizing students by choice? The notion of student choice and its effects on student performance have been positive in this study.

Performance Indicator Two: Cognitive Health-Related Fitness Test

Why did students attain the highest levels of competency on a cognitive written test in physical education? How did teachers overcome the negative effects of the poverty index and get students to attain competency? The answer lies in the

administration of the test and the how the teachers prepared the students for the test. The administration of the test required three steps: a) the teacher contacted the SCPEAP identifying the number of students enrolled and tests were mailed, b) then the teachers had to find someone to administer the tests to their class, and the teachers had to score the test. This performance indicator was the most compliant because it had the simplest protocol to perform. In actuality teachers were only responsible for grading the tests with the answer sheets provided. Minimizing the number of steps involved in test administration and scoring for the teachers and providing the correct answers increased the compliance, thus increasing scores.

To prepare the students teachers used test/retest strategies. Teachers were given sample tests and teachers had students practice the tests. Teachers identified eighteen different strategies to help prepare the students. Teachers were willing to try just about anything, even creating their own case studies, to teach health-related fitness. Though teachers would not admit to lacking health related fitness knowledge, their diligent efforts to teach the information to the students suggest that they did a lot of preparation. This preparation, perhaps included a "brushing up" on their own knowledge of health-related fitness.

Performance Indicator Three: Physical Activity Outside of Physical Education

The current emphasis of reform encourages the promotion of physical activity as a lifestyle choice. Societal health issues make physical education a viable means to address such health issues as cardiovascular disease, juvenile diabetes, and obesity. These issues make physical activity as a lifestyle choice good for our profession; yet, teachers thought it was the least important. Unlike performance indicator one

(movement forms), performance indicator three (physical activity outside of physical education) took place beyond the walls of the classroom. Issues of compliance can be related to lack of contact and control of the situation. Teachers sensed that lack of control and were uncomfortable being responsible for student behavior outside of the classroom. Discovering what teachers did in this study who were successful at getting students to be participants outside of physical education is a critical question to addressing societal health issues. Teachers used grades to motivate students to participate, monitored progress with exercise logs, brainstormed community activities, and contacted parents and coaches to help the students. With this performance indicator we look to the low performing schools for the best examples of how to attain student competence. Teachers at low performing schools provided additional activities for students in open gyms, intramurals, or walking programs. Some teachers at low performing school gave up their lunch hour to be in the gym so students could participate in physical activity. These teachers know that in their communities contain no YMCAs, health clubs, or swimming pools. Recent literature has suggested the use of pedometers and walking programs to provide physical activity (Prusak & Darst, 2002) may be an effective way to motivate students to be physically active. Teachers at low performing schools believed they would need to provide opportunities to be physically active in order for the students to be successful. Motivating students with incentives or grades was met with mixed results.

Teachers that linked performance indicator three to another performance indicator, such as performance indicator four (meeting the age and gender requirements of the Fitnessgram©) had high levels of student performance. This meant that physical

activity became personal. Physical activity was a way to address personal goals based on the fitness test results. One low performing teacher created a project as an assignment in which the students had to create an exercise program for an adult. The teacher checked the homework then had students log their progress as the student trained with the adult. This is a real life alternative to approaching physical activity. These alternatives, and others, such as, informal time with the physical education teacher and the monitoring of student progress were the most effective ways that teachers approached this performance indicator. More in-depth analysis of the types of activities engaged in for physical activity, the relationship between performance indicator one, three, and four, and how best to promote physical activity in physical education need further investigation.

Performance Indicator Four: Meeting the Age and Gender Requirements for Fitness

The results for performance indicator four confirm our worst fears; young people are unfit. These findings come as little surprise yet command attention when reviewing the findings in this study. Low performance (fitness) can be explained by the relationship between poverty index and societal health issues, such as obesity. The question is can physical education in South Carolina, in its present structure, make headway with regard to student performance on fitness tests? The current state mandate of one credit of physical education is usually compressed into a single semester with 75-90 minutes of physical education each day.

Physical education programs are often called upon to teach health-related fitness, movement forms, encourage physical activity and sometimes to teach human sexuality.

The greatest fitness gains happen in the first four to six weeks of a training program. With school interruptions, student absenteeism, and the present structure of physical education programming, it is difficult to see how programs could have a lasting direct impact on fitness. The gains that may be made while students are enrolled in physical education are not enough to meet the age and gender requirements of all five health-related fitness components.

Nutrition plays a large part in fitness levels. Poor eating habits can inhibit health gains. Medium and low performing schools highlighted how fitness of students had improved over the semester but did not improve enough to pass the criteria. Physical education programs have a long way to go before there can be success in fitness equal to that in the other performance indicators. The question remains what is the best way to address this issue? Whether high or low performing, all programs are doing a poor job with improving fitness levels. Two high performing schools used cardio rooms that looked like modified health clubs, to help students with their fitness levels. Those two schools had some of the highest reported class fitness levels at 85%. These fitness rooms had televisions, treadmills, computers, bikes, weights, resistance bands, and more to help students get fit. Teachers felt modeling of use of the cardio room was also important.

This is not to suggest that community health clubs provide physical education, but the opposite. Some employers encourage wellness and mid-day workouts to promote health among employees. Should students be able to jump on a treadmill before class, put on a heart monitor during study hall and ride a stationary bike, or lift weights regularly after school or on weekends? We would all agree that these

opportunities would be wonderful, but making it happen is another story. At least two schools, out of the 10 visited, made it a reality. States like Massachusetts have discussed a statewide initiative moving physical education programs in this direction.

What is most encouraging is that physical education programs with cardio rooms also had high competency rates in the other performance indicators. These schools did not just focus on a single performance indicator. In one class students came in, completed a community warm up, were then assigned to one of three stations, and began their work. This was the end of a volleyball unit. Eight students played four on four volleyball (the protocol for volleyball assessment), while other students assessed each other on the curl ups at the second station. The third station was a cardio room located just off of the gym. Students had a workout posted on the board and exercise logs to record their workouts. Curl ups switched with cardio, then volleyball switched with them. The teacher predominantly supervised the volleyball game, which was self-officiated, but was in very close proximity to the cardio room. When asked how a small school, with a limited physical education budget could create such a program, the answer was simple, "we made it a priority."

Effectiveness of Reform

Secondary physical education programs have lacked impact and need to change. In this study every school made substantial change to their physical education programs, whether high, medium or low performing. The difference between the school performance levels was the time was change took place. For the high performers the beginning of change came with the one year state mandated in physical education (seven years prior to the assessment). High performing schools had quality programs before the

accountability was in place. For medium and low performing schools, change did not come until the accountability system was enacted.

Change for each school was unique to its context and setting, as some schools had a lot farther to go than others. For one teacher the SCPEAP accountability helped a teacher clear the way of many inhibitors, such as, student compliance, "Now we finally have the teeth and the backing so we can do what we have always wanted to do in this program." -School #60 (low performing), Teacher #1.

These teacher comments suggest that this is only the beginning of change. Teacher accountability from the state resulted in teachers holding students accountable in the classroom. Teacher effectiveness in this study is not being addressed by observational coding methods, but by student performance data. The use of student performance data across four performance indicators, collected and scored by the teachers is an innovative way to assess program effectiveness in physical education. This assessment discriminated between high and low performing schools and resulted in schools teaching to the standards.

Haertel (1999) has suggested that high-stakes accountability, as measurement, has the potential to alter instruction and change the curriculum. Public demand for effectiveness necessitates the presence of accountability in schools, but this demand has excluded physical education programs. SCPEAP has brought physical education programs into the public eye. High stakes assessment has played a substantial role in education. The initial intentions of measuring student achievement gave way to a big stick approach to holding teachers accountable for student learning. Such strong arm tactics have been met with mixed reviews. In this case, the teachers were positive about

the accountability. Holding physical education programs accountable is a necessary part of reform efforts to create secondary physical education programs that have an impact on students' lives.

The final effects of this first-ever high stakes accountability are still unclear. What will happen to low performing schools? Action toward low performing schools, whether providing help or levying sanctions is the responsibility of the SDE or of local school boards and administration. At this time, it is unknown how local administrators have reacted to scores of zero, resulting from either non-compliance or non-competence, on the physical education assessment. The intent of high-stakes accountability is to hold schools and teachers responsible for the effectiveness or ineffectiveness of physical education programs. Interpretation of issues of non-compliance and consequence was left up to local administration.

The lengthy time frame to reform initiatives often makes it problematic to identify specific influential factors. In this study, many physical education programs did not change until the statewide accountability system was in place, thus making it easier to identify school, teacher, and student characteristics, teacher behaviors, and other factors that facilitated and inhibited reform in physical education.

Lawson (1998) concluded that "multiple benefits" would result if changes, through reform efforts could be made to physical education programs. The most notable benefit from the SCPEAP was the increased emphasis on student learning by focusing on all four performance indicators as physically active lifestyle factors, a second benefit was changes in the curriculum, emphasizing physical activity. The ability of high performing physical education departments to purposefully link the performance

indicators together to provide meaningful experiences for their students is an impressive by-product of the SCPEAP. Perhaps benefits such as increased emphasis on health-related fitness and the requirement of participation in outside of physical education physical activity will impact students' lives beyond their physical education experiences. We do not know the consequence of these program innovations for several years.

Packaging standards-based accountability into a statewide initiative for physical education is a long and arduous process requiring an extensive commitment and support from hundreds of people. The SCPEAP initiative required vertical thinking, across all levels of educational bureaucracy, to come to fruition. Years of advocacy, lobbying, teacher development, development of materials, collection of pilot data and creation of policy went into the state mandated assessment program., Physical education programs have never before been held to any substantive level of accountability. Despite some growing pains, this investment of reform in physical education, in South Carolina, has resulted in a high yield.

Table 1

Overall School Physical Education Scores

	Maximum	Minimum	M	Median	SD
Overall	84%	0%	42%	43%	22.79
Performance Indictor 1 (Movement forms)	90%	0%	41%	41%	25.26
Performance Indicator 2 (HRF cognitive test)	100%	0%	57%	68%	30.95
Performance Indicator 3 (Physical activity)	100%	0%	41%	36%	36.29
Performance Indicator 4 (Fitness scores)	85%	0%	28%	28%	24.85

Table 2

School and Teacher Performance by Performance Indicators and Level of Compliance

Unit of Analysis	Performance Indicator 1 (Movement)	Performance Indicator 2 (HRF test)	Performance Indicator 3 (Activity)	Performance Indicator 4 (Fitness)	Overall
			All (n = 62)		
School	41%	57%	41%	28%	42%
			Compliant Only (n = 40)		
School	52%	73%	62%	40%	55%
			All (n = 160)		
Teacher	41%	58%	42%	31%	42%
			Compliant Only (n = 109)		
Teacher	55%	72%	56%	44%	55%

Note: The overall score may be influenced by rounding for each performance indicator.

Table 3

Student Competency by Activity

Activity	Frequency	Competence of Students with Non-compliance	Competence of Students Without Non-compliance	Percentage of Compliance
Aquatics	1	100%	100%	100%
Square Dance	3	100%	100%	100%
Ballroom Dance	1	92%	92%	100%
Folk Dance	1	91%	91%	100%
Line Dance	3	89%	89%	100%
Aerobic Dance	7	76%	89%	86%
Table Tennis	8	68%	78%	86%
Gymnastics	1	63%	63%	100%
Flag Football	11	53%	79%	67%
Basketball	47	50%	73%	68%

Table 3 (continued).

Student Competency by Activity

Activity	Frequency	Competence of Students with Non-compliance	Competence of Students Without Non-compliance	Percentage of Compliance
Weight Training	45	48%	90%	53%
Archery	4	48%	96%	50%
Volleyball	31	48%	70%	68%
Track & Field	5	43%	85%	50%
Frisbee	5	41%	100%	41%
Golf	9	37%	52%	71%
Badminton	32	35%	60%	59%
Soccer	8	35%	70%	50%
Tennis	30	32%	55%	59%
Softball	13	31%	74%	42%
Bowling	10	24%	58%	42%

Table 4

Summary of Teacher Survey Data

Factor	School Performance Level			
	High (n = 13)	Medium (n = 4)	Low (n = 8)	Overall (n = 25)
Level of Support				
Very Strong	39%	0%	63%	40%
Strong	46%	50%	25%	40%
Weak	7%	25%	13%	16%
Very Weak	0%	25%	0%	4%
Performance Indicator One				
Thought students would do Better (1st movement form)	46%	75%	75%	60%
Thought students would do better (2nd movement form)	15%	50%	75%	40%
Performance Indicator Two				
Increased emphasis on HRF	54%	100%	75%	68%
Used homework	31%	50%*	88%	52%*
Performance Indicator Three				
Students did better than expected	46%	50%	88%	60%

Table 4 (continued).

Summary of Teacher Survey Data

Factor	School Performance Level			
	High (n = 13)	Medium (n = 4)	Low (n = 8)	Overall (n = 25)
Assessment Program Effects				
Eliminated activities	8%	0%	25%	12%
Provided better instruction	62%	75%	75%	64%
Financial support	85%	100%	100%	92%
Increased collaboration	85%	100%	86%	84%
Long term planning	92%	100%	100%	96%
Increased knowledge	62%	100%	88%	76%
Student choice	100%	0%	25%	60%
Parental contact	100%	50%	100%	92%
Consider PIs in teaching	69%	75%	88%	76%
Changed assessments	62%	100%	88%	76%
Support accountability	100%	75%	100%	97%
Department meetings	85%	75%	71%	76%
Use PIs to plan curriculum	92%	100%	75%	84%
Eliminated for alignment	33%	25%	50%	36%
Promote higher learning	85%	100%	100%	92%

Table 4 (continued).

Summary of Teacher Survey Data

Factor	School Performance Level			
	High (n = 13)	Medium (n = 4)	Low (n = 8)	Overall (n = 25)
Assessment Program Effects				
Understand PA better	69%	75%	100%	80%
Curriculum and Instruction				
Refer to SCEAP notebook	25%	25%	50%	32%
Consult curriculum guide	42%	25%	63%	44%
Use video for assessment	31%	0%	38%	28%
Use textbooks	67%	50%	50%	56%
Access classroom	33%	50%	63%	44%
Use classroom	25%	75%	50%	40%
Administrator observation	17%	0%	13%	12%
Discuss assessment	62%	25%	43%	48%
Use PI for grading	69%	25%	63%	60%

*Not all teachers responded to this question.

Table 5

Facilitators Identified in Teacher Survey and Interview Data

Facilitator	School Performance Level			
	High (n = 13)	Medium (n = 4)	Low (n = 8)	Overall (n = 25)
Strong communication	100%	100%	100%	100%
Administrative support	85%	100%	75%	84%
Other physical education staff	92%	75%	88%	84%
Physical Education Institutes (PEIs)	92%	25%	100%	84%
Performance indicators	77%	75%	88%	80%
Student accountability	85%	75%	75%	80%
CD-ROM Materials	77%	75%	63%	56%
Teacher accountability	85%	50%	50%	56%
Use of videotaping	85%	50%	63%	56%
Student choice	92%	50%	25%	64%
Data collection training	15%	25%	100%	44%
SCPEAP committee	15%	25%	100%	44%
Department planning	31%	50%	13%	28%
SCPEAP materials	8%	75%	13%	20%
Higher expectations of students	23%	50%	0%	20%

Table 5 (continued).

Facilitators Identified in Teacher Survey and Interview Data

Facilitator	School Performance Level			
	High (n = 13)	Medium (n = 4)	Low (n = 8)	Overall (n = 25)
Department decision making	15%	25%	13%	16%
Longer units	8%	25%	13%	12%
All supports	8%	0%	13%	8%
Class size	15%	0%	0%	8%
Department leadership	8%	0%	13%	8%
Increased fun	8%	0%	13%	8%
HRF knowledge	8%	0%	13%	8%
Student characteristics	0%	0%	25%	8%
Facilities	0%	25%	0%	4%
Dress out policy	0%	25%	0%	4%

Table 6

Inhibitors Identified in Teacher Survey and Interview Data

Inhibitor	School Performance Level			
	High (n = 13)	Medium (n = 4)	Low (n = 8)	Overall (n = 25)
Changing SCPEAP materials	46%	100%	63%	60%
Interruptions	54%	75%	63%	60%
Assessment protocols	46%	75%	50%	52%
Large class size	31%	75%	63%	48%
Not enough time (one semester)	54%	50%	38%	48%
Budget	23%	50%	63%	40%
Paperwork	15%	75%	63%	40%
Lack of textbooks	0%	25%	50%	20%
Guidance scheduling classes	15%	25%	25%	20%
Facilities	0%	25%	38%	16%
Lack of resources	0%	0%	50%	16%
Other physical education staff	0%	50%	25%	16%
Lack of equipment	8%	50%	0%	12%
SCPEAP training	8%	0%	25%	12%
Lack of knowledge	0%	0%	25%	2%
Lack of student accountability	8%	13%	0%	2%

Table 6 (continued).

Inhibitors Identified in Teacher Survey and Interview Data

Inhibitor	School Performance Level			
	High (n = 13)	Medium (n = 4)	Low (n = 8)	Overall (n = 25)
Management during testing	0%	0%	25%	8%
Student choice	0%	0%	25%	8%
Student characteristics	0%	0%	25%	8%
Time away from instruction	0%	13%	13%	8%
Lack of administrative support	0%	0%	13%	4%
Lack of fun	8%	0%	0%	4%
Performance indicator 3 cheating	0%	0%	13%	4%
Use of videotaping	8%	0%	0%	4%
Weather	8%	0%	0%	4%

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